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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,957	12/18/2001	Gerhard Bartscher	81,487/LPK	3450

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EXAMINER

CHEN, SOPHIA S

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,957

Applicant(s)

BARTSCHER ET AL.

Examiner

Sophia S. Chen

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(SM)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,11-16 and 19 is/are rejected.
- 7) ☒ Claim(s) 2,3,8-10,17,18 and 20-22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/18/01 & 9/30/02
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “cooling device” (claims 8 and 9) and “heating roller” (claim 22) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The use of the trademark "Teflon" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

4. Claims 1-22 are objected to because of the following informalities:
 - a. Claim 1, line 1, delete "(1)"; line 2, delete "(11)"; line 3, delete "(3)" and "(11)"; line 4, delete "(3)"; line 5, delete "(17)" and "(11)"; line 7, delete "(17)" and "(19)"; line 8, delete "(21)"; and line 9, delete "(19)".
 - b. Claim 2, line 3, delete "(21)", and line 4, delete "(21)".
 - c. Claim 2, line 4, there is no antecedent basis for "the stays".
 - d. Claim 3, line 2, delete "(21)".
 - e. Claim 4, line 2, delete "(19)", and line 3, delete "(11)".
 - f. Claim 5, line 2, delete "(19)", and line 3, delete "(11)".
 - g. Claim 6, line 2, delete "(19)".
 - h. Claim 9, line 3, delete "(19)" and "(11)".
 - i. Claim 10, line 2, delete "(19)", and line 3, delete "(11)".

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- j. Claim 11, line 2, delete "(5,7)", and line 3, delete "(19)".
- k. Claim 12, line 2, delete "(19)".
- l. Claim 13, line 2, delete "(19)".
- m. Claim 14, line 2, delete "(19)".
- n. Claim 15, line 2, delete "(19)".
- o. Claim 17, line 2, delete "(19)".
- p. Claim 19, line 2, delete "(19)".
- q. Claim 20, line 2, delete "(63)", and line 3, delete "(19)".
- r. Claim 21, line 2, delete "(63)", and line 3, delete "(57)" and "(19)".
- s. Claim 22, line 3, delete "(19)", line 5, delete "(11)" (both occurrences), line 6, delete "(9)", line 7, delete "(19)" and "(11)", and line 8, delete "(19)".

Appropriate correction is required.

Claim Rejections – 35 USC §102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1 513 846 (cited in PTO Form-1449).

The publication discloses at least one fixing device comprising at least one heating device 2 for fusing the toner (page 1, lines 60-66); at least one transport device

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1, in order to supply a substrate 4 to the heating device 2, to guide it past the heating device 2 and/or to further transport it from the heating device 2 (Figure 1) has at least one suction belt 5 that has a number of through-passage openings and that can be impinged with a vacuum, characterized in that the suction belt 5 is constructed as a mesh (page 1, lines 67-74; page 2, lines 36-47; Figure 1); characterized in that the adhesion of the substrate 4 on the suction belt 5 is done by electrostatic charging of the substrate 4 and/or the suction belt 5 and/or as a result of friction between the substrate 4 and the suction belt 5 (page 3, lines 50-56); and characterized in that the suction belt 5 is manufactured so that it is an endless closed loop (Figures 1 and 3).

Claim Rejections – 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 4, 5, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1 513 846 in view of Fukuda et al. (US Pat. No. 6,130,408)

GB 1 513 846, as discussed above, differs from the instant claimed invention in not disclosing at least the surface of the suction belt coming into contact with the substrate is coated with a separate agent or a material that has a low surface energy; and the suction belt has at least one guide element running in the rotation direction.

Fukuda et al. a fixing device comprising at least one heating device 4; at least one transport device 1b, in order to supply a substrate 6 to the heating device 4, to guide it past the heating device 4 and/or to further transport it from the heating device 4 (Figure 1); at least the surface of the transport belt 1b coming into contact with the substrate 6 is coated with a separate agent 15 or a material 15 that has a low surface energy (column 5, lines 46-54); and the transport belt 1b has at least one guide element (ribs) 13 running in the rotation direction (Figure 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the separate agent or the low surface energy material as taught by Fukuda et al. to the suction belt of GB 1 513 846 to prevent toner sticking to the belt (Fukuda et al., column 5, lines 51-55).

Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the guide element as taught by Fukuda et al. to the suction

belt of GB 1 513 846 so that the suction belt and the substrate can be moved at the same speed (Fukuda et al., column 5, lines 20-28).

10. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1 513 846 in view of Ezu (JP 06-092503, cited in Form PTO-1449).

GB 1 513 846, as discussed above, differs from the instant claimed invention in not disclosing at least the surface of the suction belt coming into contact with the substrate is coated with a separate agent, in particular, with silicone oil.

Ezu discloses an image forming apparatus comprising a carrier belt 62 being coated with silicone oil (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the silicone oil as taught by Ezu to the suction belt of GB 1 513 846 to prevent static electricity from being generated due to friction (Ezu, abstract).

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1 513 846 in view of Deguchi et al. (JP 57-130074).

GB 1 513 846, as discussed above, differs from the instant claimed invention in not disclosing the heating device has at least one microwave resonator through which the suction belt is guided.

Deguchi et al. discloses an image forming apparatus comprising a microwave heater for fusing the toner 2 on a substrate 1 conveyed on a suction belt 3 (abstract and Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the microwave heater as taught by Deguchi et al. in place

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of the heating device of GB 1 513 846 because of same functionality for fusing the toner on the substrate.

12. Claims 12, 14, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1 513 846 in view of Sato (JP 09-142687, cited in Form PTO-1449).

GB 1 513 846, as discussed above, further discloses the suction belt 5 being a perforated, seamless metal band (page 1, lines 67-70).

GB 1 513 846 differs from the instant claimed invention in not disclosing the suction belt being made out of a fabric, in particular, a polyester; the suction belt has at least one anti-static element; and the anti-static element being integrated as yarn into the fabric.

Sato discloses an image forming apparatus comprising a paper sheet feeding belt 1 being made out of a fabric, in particular, a polyester (abstract); the paper sheet feeding belt 1 has at least one anti-static element (carbon evaporation fiber; abstract and paragraphs [0018] and [0022]); and the anti-static element being integrated as yarn into the fabric (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the material of the paper sheet feeding belt as taught by Sato in place of the metal material of GB 1 513 846 to prevent a substrate from stuck on the belt (Sato, abstract).

Allowable Subject Matter

13. Claims 2, 3, 8-10, 17, 18, and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kumada et al. (US Pat. No. 4,768,057) discloses a flash fixing apparatus comprising a heating device and a suction belt.

Mitsuya et al. (US Pat. No. 5,081,502) discloses a fixing device comprising a flash lamp and a suction belt.

Islam (US Pat. No. 5,669,032) discloses a conveyor belt being coated with Teflon™.

Schlueter, Jr. et al. (US Pat. No. 5,784,679) discloses an image drying and fixing apparatus comprising a heating device and a conveyor belt.

Murata et al. (JP 01-185680 A) discloses an image forming apparatus comprising a heating device and a suction belt.


Gunji et al. (JP 01-270086 A) discloses an image forming apparatus comprising a heating device and a suction belt.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
April 11, 2005